

What is claimed is:

1. An apparatus for handling cards comprising:
a card loading area for receiving a group of cards to be arranged into randomized hands;
a shuffling chamber having a plurality of card-receiving compartments, wherein
5 each compartment is able to receive more than one card within an opening of the card-receiving compartment,
a card moving system comprising two sequential single card moving components positioned for moving at least one card at a time from the card loading area into a card-receiving compartment,
10 the two sequential card single card moving components comprising a first single card moving component that moves at least a single card from the card loading area towards a second card moving component and the second card moving component receiving the individual card from the first card moving component, and
a microprocessor for controlling card movement; wherein the first single card
15 moving component reduces moving forces against the single card when the second card moving component applies moving forces against the single card.
2. The apparatus of claim 2 wherein the card moving mechanism moves only
one card at a time into a card-receiving compartment.
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3. The apparatus of claim 2 wherein each card-receiving compartment comprises a set of cards selected from the group consisting of players' hands, dealer's hands, discards, and excess cards.
- 25 4. The apparatus of claim 1 wherein a separator is located between each adjacent card-receiving compartment, and there is an edge of the separator that a card moved into card-receiving compartments contacts before that card is fully inserted into a card-receiving compartment.

5. The apparatus of claim 1 wherein the rack of card-receiving compartments is moveable in a vertical direction with respect to the two sequential single card moving components.

5 6. The apparatus of claim 4 wherein the separator has two card contacting surfaces, an upward deflecting surface and a downward deflecting surface.

7. The apparatus of claim 1 wherein the card moving mechanism is movable with respect to a stationary rack of card-receiving compartments.

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8. The apparatus of claim 1 wherein both the card moving mechanism and the plurality of card-receiving compartments are movable.

9. The apparatus of claim 1 wherein the shuffling chamber comprises a
15 configuration selected from the group: a carousel, a vertical mixing stack and a fan shape.

10. The apparatus of claim 1, wherein the first single card moving component comprises a feed roller mounted for rotation on a rotational shaft.

20 11. The apparatus of claim 10, wherein the rotational shaft is driven by a drive mechanism.

12. The apparatus of claim 10, and further comprising a clutch mechanism for disengaging the feed roller from the drive mechanism.

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13. The apparatus of claim 11, wherein the feed roller speed is controlled by at least one apparatus selected from the group consisting of: a drive motor, a dynamic clutch mechanism, a slip clutch, release gearing, clutch controller, drive speed controller and a sensor.

14. The apparatus of claim 12, wherein the clutch mechanism is capable of releasing when a card contacting the feed roller experiences linear acceleration.

5 15. The apparatus of claim 1, wherein each card-receiving compartment is of the same size.

10 16. The apparatus of claim 1, wherein not all of the card-receiving compartments are of the same size.

17. The apparatus of claim 1, wherein the second card moving component comprises a pair of speed up rollers, each speed up roller mounted for rotation on a rotational shaft.

15 18. The apparatus of claim 17, wherein at least one rotational shaft is driven by a motor.

19. The apparatus of claim 17, wherein at least one roller is an idler roller.

20 20. A method for delivering hands of randomly mixed cards comprising:
providing at least one deck of playing cards;
forming individual hands of randomly mixed playing cards within an apparatus;
delivering individual hands from the apparatus, one-at-a-time, with all cards in the
hand delivered at the same time.

25 21. The method of claim 20 wherein individual hands are delivered to the delivery tray.

22. The method of claim 21 wherein after at least one individual hand is manually removed from the delivery tray, another individual hand is delivered from the apparatus to the delivery tray.

5 23. The method of claim 21 wherein the total number of cards in hands delivered from the apparatus comprise a total number of cards that are less than the total of the at least one deck of cards..

10 24. The method of claim 21 wherein at least one, but less than all individual hands is a subset of cards that is delivered to a dealer as a hand.

15 25. The method of claim 21 wherein each hand delivered from the apparatus to the tray is then delivered to a position on a gaming table that is distinct from a position where another hand is delivered.

26. The method of claim 20 wherein all hands are delivered to a storage area within the apparatus without removal of previous hands from the storage area.

20 27. A mechanism for feeding cards individually into a card shuffling or hand forming apparatus, comprising:

a surface for supporting a stack of cards;
a feed roller with a frictional outer surface, mounted to a rotational shaft and positioned to feed cards individually from the stack into a pair of speed up rollers;
a drive mechanism that rotates the feed roller;
25 a clutch mounted to the shaft for disengaging the feed roller from the drive mechanism as an individual card contacts a pair of speed up rollers; and
a pair of speed up rollers for advancing cards into the card shuffling or hand arranging apparatus as the cards are fed, wherein the feed roller is disengageable from the drive mechanism.

28. The mechanism of claim 27, wherein the stack of cards are supported on a first declining surface, the mechanism further comprising a slideable wedge member for sliding engagement with the declining surface and for retaining the stack against the feed roller.

29. The mechanism of claim 27, wherein the clutch is a dynamic clutch mechanism.

30. The mechanism of claim 27, wherein one of the speed-up rollers is driven by a drive mechanism.

31. The mechanism of claim 27 wherein one of the speed-up rollers is an idler roller.

32. The mechanism of claim 27 wherein at least one of the rollers mounted to a shaft is driven by a motor that can be disengaged from the roller by automatic operation of the mechanism.

33. A method of feeding cards into a card shuffling and/or card sorting apparatus comprising:

providing a feed roller mounted for rotation about a shaft, a drive mechanism for rotating the shaft and clutch capable of disengaging the roller from the drive mechanism when a speed of the card accelerates and exceeds a speed of movement caused by the feed roller; and a pair of speed-up rollers;

feeding a card from a stack with the feed roller until a leading edge of the card contacts the speed-up rollers; and

when the speed of the card accelerates and exceeds the speed at which the card is fed by the feed roller, the clutch disengages from the drive roller.

34. The method of claim 33, wherein after disengagement of the feed roller, the card initially remains in contact with the roller when a leading edge of the card comes into contact with the speed-up rollers.

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35. The method of claim 33, wherein the feed roller spins freely, after the card comes into contact with the speed-up rollers.